

**Engineering Notes for  
1432 Thin  
2/17/2016**

A. Haul route roads:

The haul routes for this contract are on National Forest System (NFS) roads, and State highways. Log haul will travel generally South on NFS roads listed in Table 1.1 then East on Highways 22 and 18 to the appraisal point of Willamina Oregon.

Roads used in this contract are non-key roads except for NFS 1491 which is a key road. Remaining mileage of roads listed in Table 1.1 shall not be used in this contract.

Key Roads in the area are open for public traffic at all times with delays not to exceed 2 hours. Road 1431 provides access to a remote weather site and is closed seasonally with a gate. Road 1432 ties through to a popular recreation area and may receive occasional public traffic.

During the planning of this sale there were several occasions where temporary road, boundary flagging and other markings were removed or disturbed by unknown parties.

Maintenance on this contract is contractor responsibility.

NFS road beginning and ending termini are detailed in table 1.1

Table 1.1

<b>Road No.</b>	<b>Miles</b>	<b>Beginning Milepost</b>	<b>Ending Termini/Milepost</b>
1410	0.38	1491	1431
1431	1.40	1410	Spur to O30 landing D
1431112	0.39	1431	Spur to O30 landing A
1432	0.55	1431	1432111
1432111	0.60	1432	Spur to landings
1491	4.00	Hwy 22	1491116
1491116	0.21	1491	Spur to O32 landing E

B. System and temporary roads –season of haul, road protection and truck assist.

See logging feasibility report (LFR) for details.

Spot rock for NFS roads is included and appraised for. In general, all system roads are appraised for rock re-surfacing or spot rocking except paved roads.

Truck assist is not appraised for.

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C. Unit Notes:

Unit O10A: Spur to unit begins at junction of 1432-112, goes west into unit and is new construction. Spur has a short section of 20% favorable pitch with good run out to 1432-111. Larger landings at D, E & F. Unit has downhill yarding to spur.

Unit O29: New construction to the slope break. Align junction to haul south. Spurs to landings A, B & C all season

Unit O30: Landings A, C, F & G roadside. Spur to D & E new construction. Road 1432-112 is mapped incorrectly and ends at landing A. Much of ground based area could be brought to landing F & G. Spur to H existing but brushy. The spurs to landings B, D & E are all season.

Unit O32 /O32A: All but one landing is accessed from the 1432 road. Short spurs to landings at slope break. One landing accesses unit from a new spur on the 1491-116. Spur to landings A, B, C & D all season. Spur to landing E follows and old cat line off of 1491-116 to the landing.

Unit O96: Short spurs to landings. Spur to landing A all season.

Table 1.2 Temporary Road Season of Haul

<b>Temp Spurs into Unit #</b>	<b>All Season Option</b>	<b>Dry Season</b>	<b>All season</b>
O10A	X		
O29			All
O30		Spur to H	Spur to B, D&E
O32(A)			All
O96		B	A

(X) Purchaser option to upgrade to all season

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D. Pre and post contract operational status for the system roads:

<b>Road #</b>	<b>Pre status</b>	<b>Post status</b>	<b>Waterbars/berms</b>
1410	Non-Key, Open	Non-Key, Open	Type 2 / None
1428	Non-Key, Open	Non-Key, Open	Type 2 / None
1428-111	Non-Key, Open	Non-Key, Open	Type 2 / None
1431	Non-Key, Open	Non-Key, Open	Type 2 / None
1431-112	Non-Key, Open	Non-Key, Open	Type 2 / None
1491	Key, Open	Key, Open	None / None
1491-116	Non-Key, Closed	Non-Key, Closed	Type 1 / Berm

E. Log Haul Operating season and Haul routes.

<b>Unit Number</b>	<b>Planned Haul Route</b>	<b>Engineering Log Haul Operating season *</b>
O10A	1432111 → 1432 → 1431 → 1410 → 1491 → Hwy 22/18 → Willamina	All season system roads / Dry season temp with option
O29	1432 → 1431 → 1410 → 1491 → Hwy 22/18 → Willamina	All season
O30	1431112 → 1431 → 1410 → 1491 → Hwy 22/18 → Willamina	All season system roads / Dry season H & I
O32(A)	1432 → 1431 → 1410 → 1491 → Hwy 22/18 → Willamina	All season / Dry season Ldg E
O96	1432111 → 1432 → 1431 → 1410 → 1491 → Hwy 22/18 → Willamina	All season

\* Dry season is June 15 – October 15.

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